Name _____

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MATH@TD

MCR3U

11U U5: Trig Ratios

TRIG IDENTITIES ASSIGNMENT – DUE FRIDAY DEC. 1 IN PERIOD 2 **C ____/ 8 A ____/16**

Prove the following Trigonometric Identities

1) $\sin(x) \cdot \tan(x) + \frac{1}{\cos(x)} = \frac{\sin^2(x)+1}{\cos(x)}$

2) $\frac{\sin^2(x)}{\tan^2(x)} = 1 - \sin^2(x)$

3) $\sin^2(\theta) = \frac{\tan^2(\theta)}{1+\tan^2(\theta)}$

4) $\sin(A) + \frac{\cos(A)}{\tan(A)} = \frac{1}{\cos(A) \cdot \tan(A)}$

5) $\tan(\theta) + \cot(\theta) = \csc(\theta) \cdot \sec(\theta)$

6) $(\cos(\phi) - \sin(\phi))^2 = 1 - 2\sin(\phi) \cdot \cos(\phi)$

7) $\sin^2(B) = \cos(B)\,[\sec(B) - \cos(B)]$

8) $\tan(x) + \frac{\cos(x)}{1+\sin(x)} = \frac{1}{\cos(x)}$